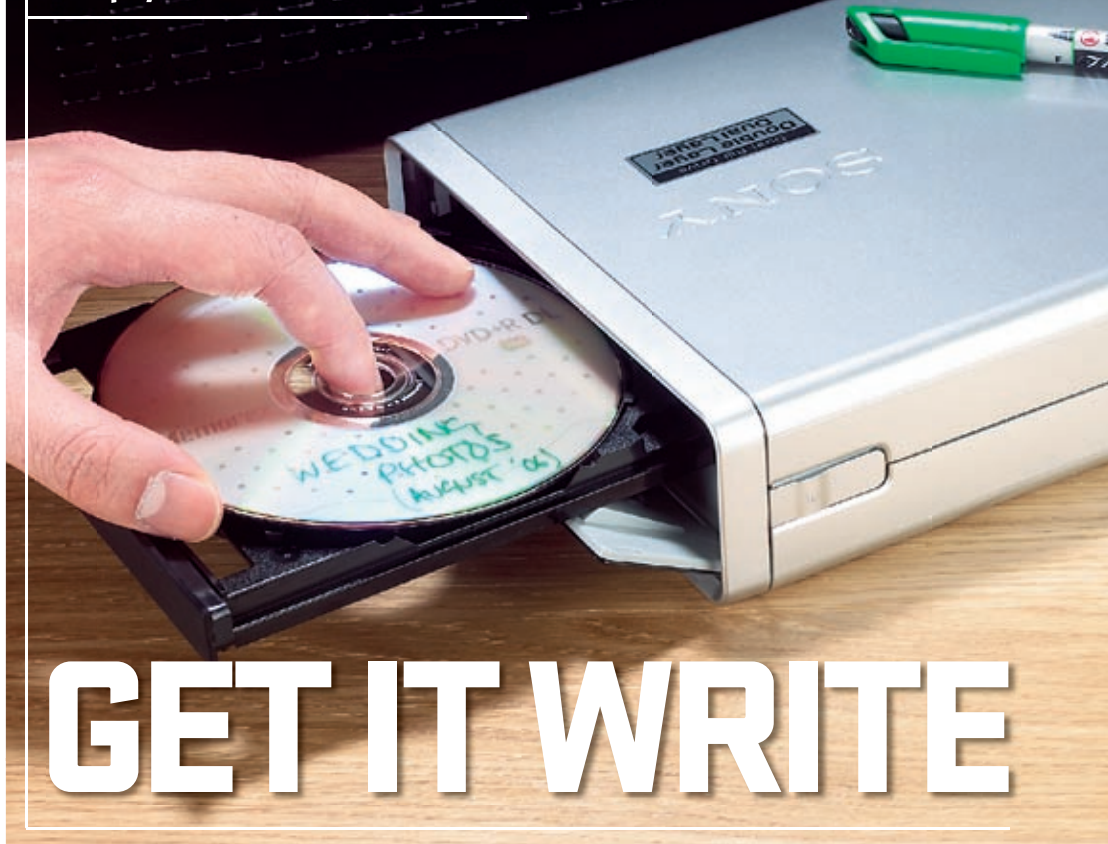


A DVD writer helps you store and access a range of media quickly and efficiently, but picking the best one can be a headache. We test 18 internal and external drives to help you choose a winner



GET IT WRITE

INTRODUCTION

Whether you want to send a copy of your home movie to relatives abroad, store TV programmes you've recorded on your computer or simply back up gigabytes of data on to a single disc, nothing beats a DVD writer. The latest models are faster and cheaper than ever before, and with dual-layer technology you can store over 8GB of data on a single disc.

Choosing a DVD writer can be tricky, though. Each drive comes with a list of specifications as long as your arm, and the speeds quoted on the box often bear little relation to performance. This month we've done the hard work for you. We've taken 18 DVD writers and put each one through dozens of tests. We've worked out which are the fastest to help you pick a speedy drive at a bargain price.

Alan Lu

PC systems and storage expert

alan@computershopper.co.uk



Choosing a... DVD Writer

Recordable DVDs come in many varieties. DVD+R and DVD-R discs hold 4.7GB of data and can be written only once; these are called single-layer discs. DVD-RW and DVD+RW are also single layer, but can be erased and reused. DVD-R DL and DVD+R DL are two-layer discs that can hold up to 8.5GB of data. All the drives in this group, with the exception of Freecom's tiny FS-50, support all these discs. Even though most drives write any type of disc, though, there are several factors that you need to consider when choosing a DVD writer.

HIGH-SPEED CHASE

Manufacturers make extravagant claims about the speed of their DVD writers, but these often bear little relation to the speeds you'll get when using them. If you know you want a drive that can write a certain type of disc quickly, check our speed results on page 100. Cheap blank DVDs are available, but the cheapest discs can be unreliable and burn slowly. To make sure we produced the best results possible, we used branded blank CDs and DVDs made by Verbatim and Imation.

Internal DVD writers are available in two types. OEM packs include just the writer, with no software or

accessories, but are usually cheaper. Proper retail products usually include some software and can include extra accessories, too. We've reviewed a mixture of OEM and retail products in this test, and have clearly marked which are OEM products.

To write DVDs, you need special software. The two most popular packages are Ahead's Nero and Roxio's Easy Media Creator. Most non-OEM drives come bundled with basic versions of these utilities, as well as DVD playback software, which will be useful if you don't already have it. The table on page 102 shows what software is included with each product.

ETCH A SKETCH

It's easy to label DVDs using a special felt-tip pen or sticky labels. Both these methods tend to look amateurish, though, and a report by an agency of the US Department of Commerce suggests adhesive labels can damage DVDs and the data stored on them.

Some drives in this review support LightScribe laser labelling. This requires specially coated discs, but allows you to use the drive's laser to etch a picture or label on to its top surface. The process takes around 15 to 20 minutes.

INTERNAL DVD WRITERS

ASUS DRW-1612BL

★★★★
£32 inc VAT



Asus's DRW-1612BL is one of only three internal DVD writers here that support LightScribe disc labelling. Unfortunately, it's one of the slower internal drives in the group when creating single-layer DVDs. It's rated to write to DVD-R and DVD+R discs at 16X, but managed 8.78X and 9X respectively. It takes almost a minute longer to create a disc than the LG GSA-H22N.

It was much better at writing two-layer DVDs. It was among the fastest internal writers in the group when burning DVD-R DL and DVD+R DL discs, although it couldn't keep up with Pioneer's DVR-111.

The DRW-1612BL is the only internal DVD writer here to include blank discs. There are two LightScribe CD-Rs and a DVD/CD carrying case. This is a nice touch, but little else about the 1612BL makes it stand out. Its single-layer DVD-writing speeds aren't impressive and there are faster drives for burning two-layer discs.

INTERNAL DVD WRITER 16X DVD-R, 16X DVD+R, 6X DVD-RW, 8X DVD+RW, 8X DVD-R DL, 8X DVD+R DL, 12X DVD-RAM, 48X CD-R, 32X CD-RW PART CODE DRW-1612BL SUPPLIER www.morecomputers.co.uk DETAILS <http://uk.asus.com>
☒ Quick two-layer writing
☒ Slower single-layer writing

HP dvd940i

★★★★
£33 inc VAT



LightScribe laser labelling was invented by HP, so it's no great surprise that the HP dvd940i writer is one of the three internal drives here that support it.

The dvd940i is speedy when writing two-layer discs. It produced some of the best results in our two-layer benchmarks, and only Pioneer's DVR-111 proved significantly quicker. It came close to meeting its claimed speed of 6X when writing DVD-R DL discs.

Unfortunately, its performance creating single-layer DVDs wasn't as impressive. It took around six minutes to fill a single-layer disc. It's not as slow as Pioneer's DVR-111, but it is one of the slower drives in the group and it just can't keep up with LG's GSA-H22N.

This is the second-most expensive internal writer here, but the box includes only the drive and a set of mounting screws. A few blank discs would have helped justify the price. As it is, the dvd940i is outdone by its competition.

INTERNAL DVD WRITER 18X DVD-R, 18X DVD+R, 6X DVD-RW, 8X DVD+RW, 8X DVD-R DL, 8X DVD+R DL, 12X DVD-RAM, 48X CD-R, 32X CD-RW PART CODE 3743218041 SUPPLIER www.scan.co.uk DETAILS www.hp.co.uk
☒ Quick two-layer writing
☒ Not so quick on single-layer discs; expensive

LG GSA-H22N (OEM)

★★★★★
£23 inc VAT



LG's GSA-H22N is one of the cheapest internal DVD writers. This low price didn't stop it trouncing the competition in our single-layer DVD tests, though. It was the only internal drive to exceed 10X when writing DVD-R and DVD+R. It doesn't match its rated speed of 18X, but it's the quickest drive here for single-layer DVD writing.

Unfortunately, its performance in our two-layer tests was less impressive. It was one of the two slower drives when creating our DVD-R DL and it lagged some way behind the best in our DVD+R DL test. Like the other internal drives here, it fell short of its rated 8x two-layer writing speed.

The GSA-H22N is very cheap. If you create lots of single-layer discs but fewer two-layer ones, it would be a good choice. However, Samsung's Super Writemaster costs just a few pounds more, performs similarly and includes a bundle of useful software and accessories.

INTERNAL DVD WRITER 18X DVD-R, 18X DVD+R, 6X DVD-RW, 8X DVD+RW, 8X DVD-R DL, 8X DVD+R DL, 12X DVD-RAM, 48X CD-R, 32X CD-RW PART CODE GSA-H22N SUPPLIER www.dabs.com DETAILS www.lge.com
☒ Fast single-layer writing; cheap
☒ Slower two-layer DVD writing

LITEON SuperAllWrite LH-20A1P

★★★★
£32 inc VAT



LiteOn's SuperAllWrite LH-20A1P is the first DVD writer we've seen that's rated to write single-layer discs at 20X. It managed just 9.33X in our DVD-R benchmark and 9.39X in our DVD+R test, though, and proved slower than many of the 18X-rated internal drives in the group.

The SuperAllWrite was more impressive when writing DVD+R DL discs. It ran our test at 5.68X, making it the second-quickest internal drive here, and our DVD-R DL test at 5.51X, so it's one of the four fastest internal drives.

It includes a copy of Ahead's Nero Recode. This allows you to recompress a two-layer DVD on a single-layer disc, as long as the original is not copy-protected. An audio cable and alternative-coloured fascias are thrown in.

This is a fast writer with good software, but it's a little expensive. We prefer Samsung's Super Writemaster, which is quicker on single-layer discs and just £26 including VAT.

INTERNAL DVD WRITER 20X DVD-R, 20X DVD+R, 6X DVD-RW, 8X DVD+RW, 8X DVD-R DL, 8X DVD+R DL, 12X DVD-RAM, 48X CD-R, 32X CD-RW PART CODE LH-20A1P-487C SUPPLIER www.scan.co.uk DETAILS www.liteonit.eu
☒ Good double-layer speed; decent software
☒ Slower single-layer writing

NEC AD-5170A (OEM)

★★★★
£23 inc VAT



NEC's AD-5170A is the only internal DVD writer in this group that doesn't support DVD-RAM, but it's also one of the cheapest. It didn't distinguish itself in our CD-R and rewritable DVD tests, but it is fast at writing single-layer DVDs. In our DVD+R test it produced the second-highest speed, running at just under 10X. At this speed, it takes only five minutes and 40 seconds to fill a DVD.

Its performance when writing two-layer DVDs wasn't as commendable. When writing DVD-R DL discs, it produced an unremarkable speed of 5.42X, taking 18 minutes and 50 seconds to write a disc. It was one of the slower internal drives here when writing DVD+R DL discs, completing our benchmark test at 5.21X in over 19 and a half minutes.

The AD-5170A is fast at writing single-layer DVDs, and is inexpensive. It's not so quick on other types of disc, however. We'd recommend paying a bit more for a drive with software.

INTERNAL DVD WRITER 18X DVD-R, 18X DVD+R, 6X DVD-RW, 8X DVD+RW, 8X DVD-R DL, 8X DVD+R DL, 48X CD-R, 32X CD-RW PART CODE AD-5170A-01 SUPPLIER www.dabs.com DETAILS www.nec.co.uk
☒ Fast single-layer writing; cheap
☒ Doesn't support DVD-RAM

NEC AD-7170A (OEM)

★★★★★
£22 inc VAT



NEC's AD-7170A is the cheapest DVD writer here. Its specifications are almost identical to NEC's AD-5170A but it performed differently, producing particularly good speeds in our rewritable disc tests.

Its performance in our single-layer DVD tests was almost identical to that of the AD-5170A. Like the AD-5170A, this drive performed poorly when writing DVD+R DL discs. Where the 5170A perked up when writing DVD-R DL discs, though, this model lagged behind to produce the slowest result in that test, taking almost 20 minutes to fill a dual-layer disc.

The AD-7170A is very cheap and it's impressively fast when writing to rewritable DVD media. Its performance on single-layer discs is good, but it is less impressive when using two-layer media. However, it's a good choice if you mainly use rewritable discs to make backups.

INTERNAL DVD WRITER 18X DVD-R, 18X DVD+R, 6X DVD-RW, 8X DVD+RW, 8X DVD-R DL, 8X DVD+R DL, 12X DVD-RAM, 48X CD-R, 32X CD-RW PART CODE AD-7170A-01 SUPPLIER www.dabs.com DETAILS www.nec.co.uk
☒ Fast writing to single-layer and rewritable discs; cheap
☒ Slow two-layer DVD writing

PIONEER DVR-111 (OEM)

★★★★★
£29 inc VAT



Pioneer's DVR-111 is the most expensive OEM internal DVD writer in the group. It's slow in some tests, but it distinguishes itself when writing two-layer DVDs. Although it couldn't reach its rated speed of 8X in our two-layer tests, it was still the fastest internal writer in both benchmarks. At 6.24X, it filled a DVD+R DL disc in 16 minutes and 22 seconds, and wrote our DVD-R DL disc at 6.15x. No other internal writer here managed higher than 6X in either test.

The DVR-111 wrote to DVD-RW discs at 5.58X, filling a disc in less than 10 minutes. Unfortunately, it proved less impressive when writing to single-layer DVDs. It was the slowest internal writer in our DVD+R test, taking almost seven minutes to write a disc, and its speed of 9.03X in our DVD-R test is one of the lowest here.

If you mainly burn two-layer DVDs, the DVR-111 is a great choice. If you often create single-layer discs, though, look elsewhere.

INTERNAL DVD WRITER 16X DVD-R, 16X DVD+R, 6X DVD-RW, 8X DVD+RW, 8X DVD-R DL, 8X DVD+R DL, 5X DVD-RAM, 40X CD-R, 32X CD-RW PART CODE DVR-111 SUPPLIER www.scan.co.uk DETAILS www.pioneer.co.uk
☒ Fast two-layer writing
☒ Slower single-layer writing; expensive for OEM model

SAMSUNG Super Writemaster SH-S182M

★★★★★
£26 inc VAT



BEST BUY Samsung's Super Writemaster includes Nero's Recode software. This allows you to squeeze a two-layer DVD movie on a single-layer DVD.

The Super Writemaster proved one of the speediest internal burners in our group when creating single-layer DVDs. It ran our tests at 10.4X on DVD-R and 9.88X on DVD+R, taking around five-and-a-half minutes to fill a disc. Only LG's GSA-H22N was faster in both tests.

Although not as quick as NEC's AD-7170A, it performed reasonably when burning rewritable DVDs. Its performance when using two-layer discs was more leisurely, and it was the one of the slower internal drives in our DVD-R DL and DVD+R DL tests.

Pioneer's DVR-111 is quicker when burning two-layer DVDs, but the Writemaster costs less and performs well with single layer-discs. With good software included, this is a great buy.

INTERNAL DVD WRITER 18X DVD-R, 18X DVD+R, 6X DVD-RW, 8X DVD+RW, 8X DVD-R DL, 8X DVD+R DL, 12X DVD-RAM, 48X CD-R, 32X CD-RW PART CODE SH-S182M/RSMN SUPPLIER www.dabs.com DETAILS www.samsungodd.com/eng
☒ Speedy single-layer writing; useful software
☒ Slower two-layer writing

SONY AW-G170A

★★★★★
£35 inc VAT



Sony's AW-G170A is the most expensive internal DVD writer here, but the bundle of software and accessories in the box is poor. There is a copy of Nero 7 Essentials, but no software for playing DVDs.

The AW-G170A was very quick in our rewritable DVD tests, coming second only to NEC's AD-7170A. Its DVD-RW speed of 5.61X is close to the 6X it says on the box, although its DVD+RW performance was closer to 4X than its rated speed of 8X.

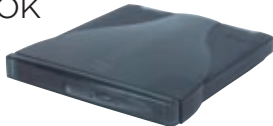
Performance in our other tests was average. It can write to single-layer DVDs in around five minutes and 50 seconds; this is close to 10X, but far from its rated speed of 18X. It finished in the middle of the table in our DVD+R DL and DVD-R DL tests.

The AW-G170A is fast at burning rewritable DVDs, but NEC's AD-7170A is quicker. If you want a boxed product with software included, Samsung's Super Writemaster is a better buy.

INTERNAL DVD WRITER 18X DVD-R, 18X DVD+R, 6X DVD-RW, 8X DVD+RW, 8X DVD-R DL, 8X DVD+R DL, 12X DVD-RAM, 48X CD-R, 32X CD-RW PART CODE AW-G170A-BC SUPPLIER PC World (see in store) DETAILS www.sony.co.uk
☒ Fast when burning rewritable DVDs
☒ Expensive

FREECOM FS-50 External Notebook Drive

★★★★★
£112 inc VAT



Unlike other portable DVD writers we've seen, the FS-50 doesn't need to be powered by a mains adaptor. The FS-50 draws power from two USB ports using a pair of standard mini USB cables. It's also the first portable writer we've seen to offer LightScribe labelling.

Freecom claims the FS-50 can write to single-layer DVDs at 8X, but it only just managed to exceed 4X in our tests. It can't write DVD-R DL discs, but it can write a DVD+R DL disc at 3.53X. At this speed, writing a complete disc takes around 29 minutes.

A decent set of accessories is bundled with the FS-50. A mains adaptor is included, along with US and European plug adaptors. Software is provided for Windows XP and 98 users, but Windows 98 users can't use LightScribe.

If you need an external DVD writer for your notebook, the FS-50 is a good choice. It's expensive and a little slow, but very portable.

EXTERNAL DVD WRITER 8X DVD-R, 8X DVD+R, 4X DVD-RW, 4X DVD+RW, 4X DVD+R DL, 24X CD-R, 10X CD-RW PART CODE 25219 SUPPLIER www.savastore.com DETAILS www.freecom.com
☒ Powered via USB; portable
☒ Can't write to DVD-R DL; slow; expensive

FREECOM DVD RW Recorder LS Pro

★★★★★
£68 inc VAT



The LS Pro's minimalist metallic case is surprisingly attractive and it can connect via FireWire as well as USB. It's fast, but a bit expensive.

In our single-layer DVD tests, the LS Pro was just slightly off the pace set by the fastest drives. It completed both our DVD-R and DVD+R tests at just under 9X. When writing to DVD+R DL, it ran at 5.89X; the best three external drives managed between 7X and 9X. It did better writing to DVD-R DL. Although only rated at 4X, the LS Pro was the fastest external writer here, running at 5.63X. This allows you to fill a DVD-R DL disc in around 18 minutes.

A Windows XP version of Roxio's Easy Media Creator burning software is included, along with Roxio software for playing DVDs. This is useful, but unlike Freecom's external notebook drive there's no software for Windows 98 users. At £63 including VAT, this drive is reasonably good value, but there are cheaper and faster alternatives.

EXTERNAL DVD WRITER 16X DVD-R, 16X DVD+R, 6X DVD-RW, 8X DVD+RW, 4X DVD-R DL, 8X DVD+R DL, 5X DVD-RAM, 48X CD-R, 24X CD-RW PART CODE 27477 SUPPLIER www.scan.co.uk DETAILS www.freecom.com
☒ Fast DVD-R DL writing; FireWire port
☒ Expensive

HP dvd940e

★★★★★
£49 inc VAT



BEST BUY HP's dvd940e is one of the cheapest external writers in the group. It can write a LightScribe label in around 18 minutes, but you don't get any LightScribe discs with which to try it out. The bulbous black case isn't pretty but feels sturdy, and Nero Express 6 and PowerDVD 6 are included.

The dvd940e did well writing DVD-R DL discs. It was the second-fastest external drive in this test, running at 5.58X. Its performance with other disc types, while not bad, left us wanting more. It took around six minutes to write a single-layer DVD. This works out as just over 9X, which is half its rated 18X speed. It burnt a DVD+R DL at 5.71X, or less than 18 minutes. Only a few seconds separated the dvd940e from the other drives in our rewritable DVD and CD-R tests.

The dvd940e is a good external DVD writer. It performs reasonably well no matter which type of disc you use and is cheap to buy. It wins our Best Buy award.

EXTERNAL DVD WRITER 18X DVD-R, 18X DVD+R, 6X DVD-RW, 8X DVD+RW, 8X DVD-R DL, 8X DVD+R DL, 12X DVD-RAM, 48X CD-R, 32X CD-RW PART CODE 3744216092 SUPPLIER www.dabs.com DETAILS www.hp.co.uk
☒ Cheap; fast DVD-R DL writing
☒ Not particularly pretty

EXTERNAL DVD WRITERS

LG GSA-E10L

★★★★★
£53 inc VAT



The GSA-E10L's glossy black case looks great and its weight and rubberised bottom stop it from sliding around on your desk. It's the only writer in our group to come with video-editing software, CyberLink's Power Producer, which is a useful extra.

Although the GSA-E10L didn't top any of our benchmarks, it performed well in most of our tests. It wrote DVD-R discs at just over 10X and DVD+Rs at 9.6X, with both speeds hot on the heels of the fastest external drives. It was disappointingly slow in our DVD-R DL test, but it performed better when writing DVD+R DL discs. Only the LiteOn and PX-755UF Plector external drives were quicker.

The GSA-E10L did well in our rewritable disc tests, too. It proved the fastest external drive when writing DVD-RW discs, and like most external drives it ran quickly in our DVD+RW test. HP's dvd940e works well on all formats of disc and is cheaper, but this is a good choice if you need video-editing software.

EXTERNAL DVD WRITER 16X DVD-R, 16X DVD+R, 6X DVD-RW, 8X DVD+RW, 6X DVD-R DL, 10X DVD+R DL, 12X DVD-RAM, 48X CD-R, 32X CD-RW PART CODE GSA-E10L SUPPLIER www.dabs.com DETAILS <http://uk.lge.com>
 Video-editing software
 Slow when writing DVD-R DL

LITEON EZDub Super AllWrite SHM- 165P6SU

★★★★★
£47 inc VAT



LiteOn's EZDub has a pair of buttons. The File button allows you to copy files to disc by dragging them into a pop-up window. The Dub button lets you copy discs without a second drive. Both are a little slow. Using the File button to burn a DVD+R took almost three-and-a-half minutes longer than with Nero.

At 3.67X, the EZDub was the slowest external desktop writer in the group when writing DVD-R DL discs. However, it was the fastest external drive when burning DVD+R DL discs. It reached almost 9X and was the only writer to exceed its stated speed of 8X.

The EZDub was just slightly slower than the best external drives in our DVD+R test, but did less well in our DVD-R test. It's a decent writer at a good price, but HP's dvd940e works well on all types of disc and is similarly cheap.

EXTERNAL DVD WRITER 16X DVD-R, 16X DVD+R, 6X DVD-RW, 8X DVD+RW, 4X DVD-R DL, 8X DVD+R DL, 5X DVD-RAM, 48X CD-R, 24X CD-RW PART CODE SHM-165P6SU SUPPLIER www.morecomputers.co.uk DETAILS www.liteonit.eu
 Fast DVD+R DL writing; cheap
 Slow when writing DVD-R DL

PLEXTOR PX-608CU

★★★★
£98 inc VAT



Like Freecom's FS-50, the PX-608CU is a portable DVD writer that can be used without the need for a mains adaptor. As well as a standard mini USB cable, though, it uses a special cable that converts a USB port on your computer into a power plug for the drive. We prefer Freecom's method of using two standard cables.

The PX-608CU is marginally slower than the FS-50 when writing single-layer DVDs, but around a minute slower than the FS-50 when burning a DVD-RW. However, it can write to DVD-R DL discs. A copy of Nero Express 6 is included, but there's no DVD playback software. It has fewer accessories than the Freecom FS-50, but it is almost £15 cheaper.

The top-loading mechanism helps to keep the PX-608CU compact, but it feels flimsy. We'd recommend carefully packing it in a notebook bag when travelling. Unless you need DVD-R DL support, the FS-50 is a better choice for burning DVDs from a notebook.

EXTERNAL DVD WRITER 8X DVD-R, 8X DVD+R, 6X DVD-RW, 8X DVD+RW, 4X DVD-R DL, 4X DVD+R DL, 5X DVD-RAM, 24X CD-R, 24X CD-RW PART CODE PX-608CU/T3UK SUPPLIER www.lambda-tek.com DETAILS www.plextor.be
 DVD-R DL support; portable; USB powered
 Slow, especially for DVD-RW writing; expensive

PLEXTOR PX-755UF

★★★★
£83 inc VAT



Plextor's PX-755UF is one of three external drives here that can connect via FireWire. Its black case is plain, but it feels sturdy. Its software bundle appears to be generous, but many of the software titles are demo versions.

The PX-755UF was the slowest external desktop writer in the group when writing single-layer DVDs and was the only one not to exceed 8X in this test. It took over seven minutes to write a DVD+R and a lengthy seven minutes and 45 seconds to fill a DVD-R disc. It was more impressive writing two-layer DVDs, where it was among the three fastest external drives. It wrote DVD+R DL discs at 7.49X, coming close to its rated speed of 8X. It performed well in our DVD-RW test and was only a little slow in the DVD+RW test.

Although it's slightly slow when writing single-layer discs, the PX-755UF performed well in our two-layer tests. It's a bit pricy, though, and we recommend the less expensive LG and HP drives instead.

EXTERNAL DVD WRITER 16X DVD-R, 16X DVD+R, 6X DVD-RW, 8X DVD+RW, 6X DVD-R DL, 10X DVD+R DL, 48X CD-R, 24X CD-RW PART CODE PX-755UF/T3BUK SUPPLIER www.europc.co.uk DETAILS www.plextor.be
 Good two-layer DVD performance; FireWire support
 Expensive

SAMSUNG Super Writemaster SE-S184M

★★★★★
£50 inc VAT



The Super Writemaster's minimalist black case looks sleek, but at £50 including VAT it's one of the cheaper external drives here. Although it couldn't reach its quoted speed of 18X when writing single-layer DVDs, it's one of the faster external drives in the group. It ran our DVD-R test at 10.33X and burnt our test DVD+R at 9.57X.

It wasn't as quick when writing two-layer DVDs, though, falling behind its quoted speed of 8X. It was the slowest external desktop writer in our DVD+R DL test, writing at 5.29X. It did better writing DVD-R DL discs, where it filled a disc in less than 19 minutes, or 5.4X. Only a few seconds separated the Super Writemaster from the other external desktop drives in our CD-R and rewritable DVD tests.

A copy of Nero Recode is included. This allows you to squeeze a two-layer DVD movie on a single-layer disc. Apart from its lacklustre DVD+R DL speed, this is a good buy.

EXTERNAL DVD WRITER 18X DVD-R, 18X DVD+R, 6X DVD-RW, 8X DVD+RW, 8X DVD-R DL, 8X DVD+R DL, 12X DVD-RAM, 48X CD-R, 32X CD-RW PART CODE SE-S184M/EUBN SUPPLIER www.komplett.co.uk DETAILS www.samsungodd.com/eng
 Cheap; useful software
 Slow DVD+R DL writing

SONY DRX-830UL-T

★★★★
£87 inc VAT



The Sony DRX-830UL-T has an attractive silver case and can connect via FireWire 400 as well as USB. A copy of Nero Recode is included for fitting DVD movies on a single-layer DVD.

We were impressed by the DRX-830UL-T's performance in our single-layer DVD tests. It was the fastest external writer in the group, although it didn't come near its rated speed of 18X. At 10.4X, it can write to a DVD-R in five minutes and 25 seconds. At 9.91X, it can write a DVD+R in five minutes and 41 seconds.

Its performance was less noteworthy when writing two-layer DVDs, filling a disc in around 19 minutes. Like Samsung's SE-S184M, it lagged behind slightly when writing to a DVD+R DL disc. It performed better on DVD-R DL and on rewritable discs.

The DRX-830UL-T looks great and is fast at writing DVD-R and DVD+R discs. It's expensive, though, and Samsung's similar SE-S184M costs £37 less. At this price, it's not a good buy.

EXTERNAL DVD WRITER 18X DVD-R, 18X DVD+R, 6X DVD-RW, 8X DVD+RW, 8X DVD-R DL, 8X DVD+R DL, 12X DVD-RAM, 48X CD-R, 32X CD-RW PART CODE DRX830ULT SUPPLIER www.komplett.co.uk DETAILS www.sonyisstorage.com
 Fast single-layer writing; useful software; FireWire
 Disappointing DVD+R DL speed; expensive

BENCHMARKS



Desktop



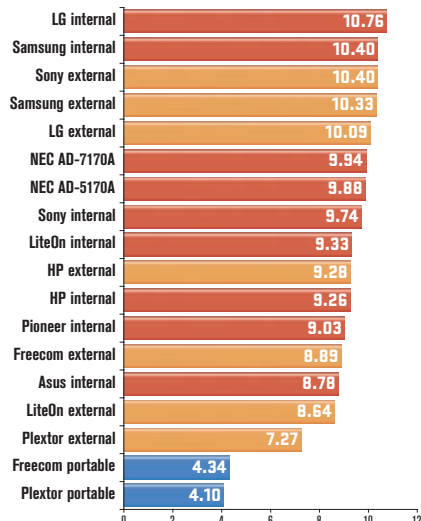
Portable



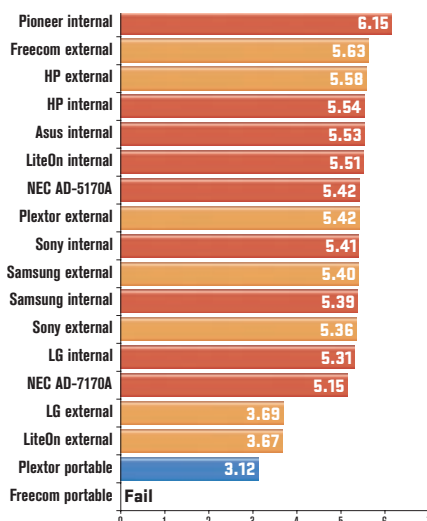
Internal

DVD Burning Burn times for single-layer, two-layer and RW discs

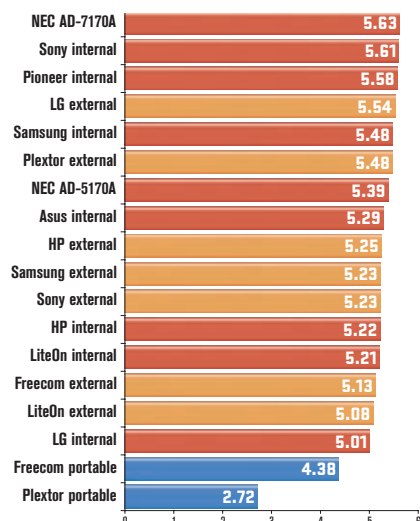
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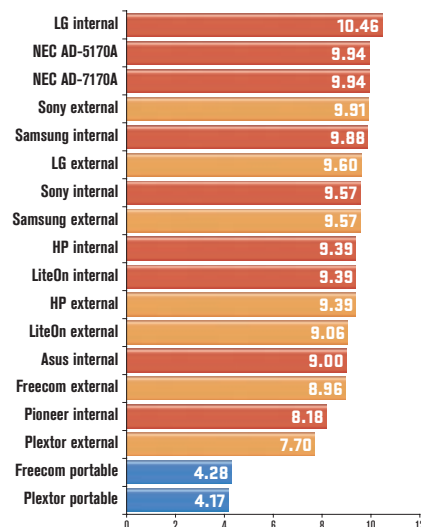
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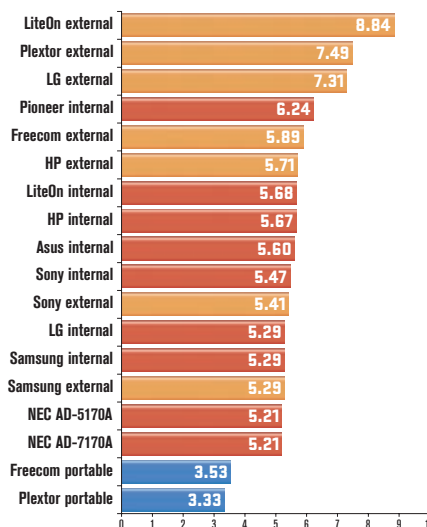
DVD-RW



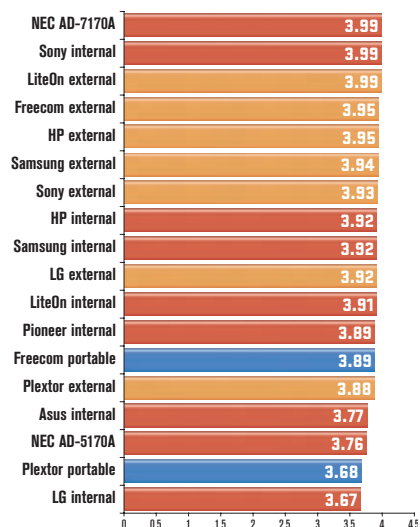
DVD+R



DVD+R DL



DVD+RW



Labs verdict DVD writers

This test shows that while DVD writers have increased in speed, their prices have fallen. You don't need to spend much to get good performance and useful software.

If you want to fit an internal writer inside your PC's case, two models stand out. Pioneer's DVR-111 is unmatched in its speed at burning two-layer DVDs, but it's not so quick when creating single-layer discs. Samsung's Super Writemaster SH-S182M isn't as quick on two-layer discs, but it's fast when writing standard DVD-R and DVD+R discs. It's also good value, and is our Best Buy internal writer.

If you want an external drive, there are three good choices. For a portable drive, we'd recommend Freecom's FS-50. It's not cheap or very fast, but it is tiny and can be powered by two standard USB cables. If you want a desktop drive, you should choose HP's dvd940e or LG's GSA-E10L. If you need video-editing software, pick LG's drive. Otherwise, HP's dvd940e is great value and wins our Best Buy award.

INTERNAL DVD WRITER



EXTERNAL DVD WRITER



How we test DVD writers

We installed each drive in this test in the same computer. To ensure that our results show the speed of each drive, rather than of the burning software being used, we used the same version of Ahead's Nero 7 Premium DVD writing software to test every drive. All the drives were updated with the latest available firmware before testing, and we tested each drive with branded Verbatim and Imation discs.

Our tests are designed to show the performance you can expect from each DVD writer when you perform everyday tasks such as burning a video DVD from movie files that you've edited or backing up files from your hard disk. We filled DVD-R, DVD+R and two-layer discs with a set of 1GB and 100MB files similar to the contents of a video DVD disc. When testing rewritable DVD-RW and DVD+RW discs, which are ideal for making backups, we used 4.4GB of smaller office and system files to fill each disc. Though not shown above, we also timed burning an 80-minute audio CD.

Finally, after recording the time taken by each drive to finish each of our tests, we converted these times into a speed rating. This rating allows you to compare one drive against another, as well as comparing the actual performance of a drive against the ratings quoted by its manufacturer. We've included these quoted speeds in the table on page 102.



DVD WRITERS

INTERNAL DVD WRITERS

MANUFACTURER	ASUS	HP	LG	LITEON	NEC	NEC	PIONEER	 SAMSUNG	SONY
Model	DRW-1612BL	dvd940i	GSA-H22N (OEM)	SuperAllWrite LH-20A1P	AD-5170A (OEM)	AD-7170A (OEM)	DVR-111 (OEM)	Super Writemaster SH-S182M	AW-G170A
Rating	★★★★	★★★★	★★★★★	★★★★	★★★★	★★★★★	★★★★★	★★★★★	★★★★
Type	Internal DVD writer	Internal DVD writer	Internal DVD writer	Internal DVD writer	Internal DVD writer	Internal DVD writer	Internal DVD writer	Internal DVD writer	Internal DVD writer
Interface	UltraDMA 33	UltraDMA 33	UltraDMA 33	UltraDMA 66	UltraDMA 66	UltraDMA 66	UltraDMA 66	UltraDMA 33	UltraDMA 66
Buffer	2MB	2MB	2MB	2MB	2MB	2MB	2MB	2MB	2MB
Dimensions (WxHxD)	43x145x173mm	41x145x169mm	41x146x165mm	41x145x170mm	42x145x174mm	41x145x174mm	42x148x180mm	42x148x170mm	41x146x170mm
Weight	800g	698g	750g	900g	708g	704g	900g	722g	708g
QUOTED READ									
CD-ROM	48X	48X	48X	48X	48X	48X	40X	48X	48X
DVD-ROM	16X	16X	16X	16X	18X	18X	16X	16X	16X
DVD+ROM dual-layer	8X	Not listed	12X	Not listed	Not listed	Not listed	12X	8X	12X
DVD-RAM	12X	Not listed	12X	Not listed	N/A	Not listed	5X	12X	12X
QUOTED WRITE									
CD-R/RW	48X/32X	48X/32X	48X/32X	48X/32X	48X/32X	48X/32X	40X/32X	48X/32X	48X/32X
DVD+R	16X	18X	18X	20X	18X	18X	16X	18X	18X
DVD+RW	8X	8X	8X	8X	8X	8X	8X	8X	8X
DVD-R	16X	18X	18X	20X	18X	18X	16X	18X	18X
DVD-RW	6X	6X	6X	6X	6X	6X	6X	6X	6X
DVD+R DL	8X	8X	8X	8X	8X	8X	8X	8X	8X
DVD-R DL	8X	8X	8X	8X	8X	8X	8X	8X	8X
DVD-RAM	12X	12X	12X	12X	N/A	12X	5X	12X	12X
FEATURES									
Laser labelling	LightScribe	LightScribe	N/A	N/A	N/A	N/A	N/A	LightScribe	N/A
Autoplay	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Multi-session	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mount Rainier	No	No	No	No	No	No	No	Yes	No
EXTRAS									
DVD-playback software	CyberLink PowerDVD 6	CyberLink PowerDVD 6	None	Ahead Nero Showtime 3 Essentials	None	None	None	Ahead Nero Showtime 2	None
DVD/CD-burning software	Ahead Nero 6.6.1.6f	Ahead Nero Express 6.6, MicroVision SureThing LightScribe Edition 4	None	Ahead Nero 7 Essentials	None	None	None	Ahead Nero Express 6.6.0.19d	Ahead Nero 7 Essentials
Blank media	2x LightScribe CD-Rs	None	None	None	None	None	None	None	None
Other standard accessories	Mounting screws, CD case	Mounting screws	None	Audio cable, mounting screws, two alternative front panels	None	None	None	Audio cable, mounting screws, two alternative front panels	Mounting screws
BUYING INFORMATION									
Price including VAT	£32	£33	£23	£32	£23	£22	£29	£26	£35
Supplier	www.morecomputers.co.uk	www.scan.co.uk	www.dabs.com	www.scan.co.uk	www.dabs.com	www.dabs.com	www.scan.co.uk	www.dabs.com	PC World (see in store)
Details	http://uk.asus.com	www.hp.co.uk	www.lge.com	www.liteonit.eu	www.nec.co.uk	www.nec.co.uk	www.pioneer.co.uk	www.samsunggodd.com/eng	www.sonyisstorage.com
Part code	DRW-1612BL	3743218041	GSA-H22N	LH-20A1P-487C	AD-5170A-01	AD-7170A-01	DVR-111	SH-S182M/RSMN	AW-G170A-BC

EXTERNAL DVD WRITERS

MANUFACTURER	FRECOM	FRECOM	 HP	LG	LITEON	PLEXTOR	PLEXTOR	SAMSUNG	SONY
Model	FS-50 External Notebook Drive	DVD RW Recorder LS Pro	dvd940e	GSA-E10L	EZDub Super AllWrite SHM-165P6SU	PX-608CU	PX-755UF	Super Writemaster SE-S184M	DRX-830UL-T
Rating	★★★★★	★★★★	★★★★★	★★★★★	★★★★★	★★★★	★★★★	★★★★★	★★★★
Type	External DVD writer	External DVD writer	External DVD writer	External DVD writer	External DVD writer	External DVD writer	External DVD writer	External DVD writer	External DVD writer
Interface	USB Hi-Speed	USB Hi-Speed, FireWire 400	USB Hi-Speed	USB Hi-Speed	USB Hi-Speed	USB Hi-Speed	USB Hi-Speed, FireWire 400	USB Hi-Speed	USB Hi-Speed, FireWire 400
Buffer	2MB	2MB	2MB	2MB	2MB	2MB	2MB	2MB	2MB
Dimensions (WxHxD)	17x144x140mm	19x165x250mm	51x174x206mm	50x160x230mm	66x172x243mm	16x137x143mm	53x167x254mm	48x160x225mm	50x163x249mm
Weight	600g	1.2kg	1.2kg	1.3kg	1.3kg	250g	1.6kg	1.2kg	1.4kg
QUOTED READ									
CD-ROM	24X	48X	48X	48X	48X	24X	48X	40X	48X
DVD-ROM	8X	16X	16X	16X	16X	8X	16X	16X	16X
DVD+ROM dual-layer	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed	8X	Not listed
DVD-RAM	N/A	5X	Not listed	Not listed	Not listed	Not listed	N/A	12X	Not listed
QUOTED WRITE									
CD-R/RW	24X/10X	48X/24X	48X/32X	48X/32X	48X/24X	24X/24X	48X/24X	48X/32X	48X/32X
DVD+R	8X	16X	18X	16X	16X	8X	16X	18X	18X
DVD+RW	4X	8X	8X	8X	8X	8X	8X	8X	8X
DVD-R	8X	16X	18X	16X	16X	8X	16X	18X	18X
DVD-RW	4X	6X	6X	6X	6X	6X	6X	6X	6X
DVD+R DL	4X	8X	8X	10X	8X	4X	10X	8X	8X
DVD-R DL	N/A	4X	8X	6X	4X	4X	6X	8X	8X
DVD-RAM	N/A	5X	12X	12X	5X	5X	N/A	12X	12X
FEATURES									
Laser labelling	LightScribe	LightScribe	LightScribe	LightScribe	N/A	N/A	N/A	LightScribe	N/A
Autoplay	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Multi-session	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mount Rainier	No	No	No	No	No	No	No	Yes	No
EXTRAS									
DVD-playback software	Roxio CinePlayer 2.2, Roxio DVDMax 4.0	Roxio CinePlayer 2.2	CyberLink PowerDVD 6	CyberLink PowerDVD 6	CyberLink PowerDVD 6 (two channel version)	None	None	Ahead Nero Showtime 2	Ahead Nero Showtime 3 Essentials
DVD/CD-burning software	Roxio Easy Media Creator 7.2.0.15, Roxio Easy Media Creator 6.3.0.11C	Roxio Easy Media Creator 7.2.0.15	Ahead Nero Express 6.6, SureThing LightScribe Edition 4	Ahead Nero 6.6.1.4	Ahead Nero Express 6.6, EZ-DUB 3.5	Ahead Nero Express 6 SE	Ahead Nero Express 6 SE	Ahead Nero Express 6.6.0.19d	Ahead Nero 7 Essentials
Blank media	1x DVD+R, 1x CD-R	5x LightScribe CD-R	None	None	None	None	None	None	None
Other standard accessories	Twin USB cable, battery, power adaptor, travel adaptor plugs	USB cable, six-pin FireWire 400 cable, four pin FireWire 400 cable, power adaptor	USB cable, power adaptor	USB cable, power adaptor	USB cable, power adaptor	USB cable, USB-to-SV cable, power adaptor	USB cable, power adaptor	USB cable, power adaptor, vertical stand	USB cable, four-pin FireWire 400 cable, power adaptor, vertical stand
BUYING INFORMATION									
Price including VAT	£112	£68	£49	£53	£47	£98	£83	£50	£87
Supplier	www.savastore.com	www.scan.co.uk	www.dabs.com	www.dabs.com	www.morecomputers.co.uk	www.lambda-tek.com	www.europc.co.uk	www.komplett.co.uk	www.komplett.co.uk
Details	www.freecom.com	www.freecom.com	www.hp.co.uk	http://uk.lge.com	www.liteonit.eu	www.plextor.be	www.plextor.be	www.samsunggodd.com/eng	www.sonyisstorage.com
Part code	25219	27477	3744216092	GSA-E10L	SHM-165P6SU	PX-608CU/T3UK	PX-755UF/T3BUK	SE-S184M/EUBN	DRX830ULT